Programme's After Market Services
NHD–4 Series Transceivers

CAR Installation Guide

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CONTENTS

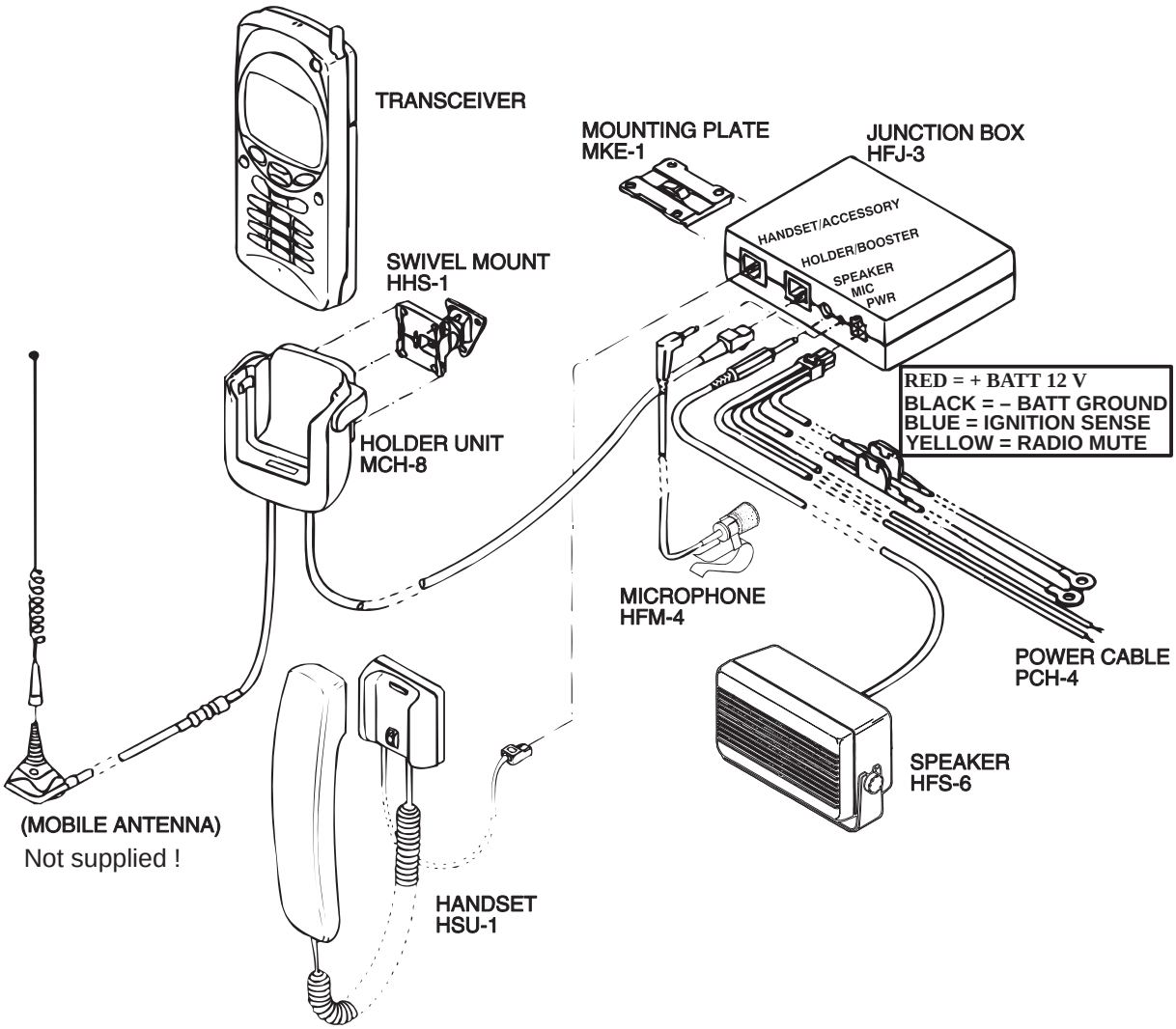
Installation Instructions 3
Mobile Handsfree Car Kit Installation (CARK–11) 3
Product List 4
Mobile HF Charging Holder (MCH–8) 4
Mounting Plate and Swivel (MKE–1 and HHS–1) 4
Junction Box (HFJ–3) 4
Power Cable (PCH–4) 4
Handsfree Microphone and Speaker (HFM–4 and HFS–6) 4
Car Radio Mute (XCRM) 5
Ignition Sense (IGNS) 5
Handset (HSU–1) 5
Modular 8 Pin Extension Cable (SCE–4) 6
Fixed & Compact HF Holder Installation 6
Product List 7
Mounting Plate and Swivel (MKE–1 and HHS–1) 7
Compact HF Holder (PHF–1) 7
Cigarette Lighter Cable (LCP–2, CARK–10 only) 7
Power Cable (PCN–5, CARK–16 only) 8
Handsfree Microphone (HFM–4) 8
Mobile Holder (MBH–6) 8

Installation Instructions

This manual aims to give the required information for installing the handheld telephone into a vehicle. The installer should rely on his or her own skills and common sense when choosing the locations. The end user should never attempt to install the telephone without professional assistance as the install requires special tools and knowledge. The terms of warranty demands that the telephone is installed by an experienced installation facility.

The system cable routing isn't usually critical; however it should not be routed next to electronic ignition systems or ABS braking systems wires or boxes to prevent interference to important automotive electrical components.

Mobile Handsfree Car Kit Installation (CARK–11)



Product List

Product:	Remarks:	Code:
Mobile HF charging holder		MCH–8
HF junction box		HFJ–3
Mounting plate	(w/16 screws)	MKE–1
Swivel mount	(w/6 screws)	HHS–1
HF microphone	(w/flat mounting plate)	HFM–4
HF loudspeaker	(w/2 fused conn. & wire ends)	PCH–4
Power cable		LCP–1
Handset option	(optional)	HSU–1
Modular 8 pin extension cable		SCE–4

Mobile HF Charging Holder (MCH–8)

The holder unit MCH–8 offers an external antenna connection, handsfree and also firm attachment to the vehicle.

Mounting Plate and Swivel (MKE–1 and HHS–1)

The mounting plate (MKE–1) and swivel mount (HHS–1) mounting brackets are interchangeable. Either one can be used to mount the MCH–8 or HFJ–3. The MKE–1 mounts flat and HHS–1 swivels for adjustable mounting angles.

Junction Box (HFJ–3)

Handsfree junction box (HFJ–3) provides and controls the supply voltages for the accessories and charge current for the handportable. In addition, it controls the audio paths to accessories and handsfree equipment. The jack marked HANDSET/ACCESSORY is reserved for the optional handset.

Power Cable (PCH–4)

The power cable connects to the junction box (HFJ–3) via the 4 pin connector. The red (+12V) and black (GND) wires connect to the battery via the supplied fused connectors. The yellow (XCRM) wire is for car radio mute and the blue (IGNS) wire is for ignition sense. The XCRM line goes down to 0 volts during a call. The maximum sink current is 250 mA, (see ”CAR RADIO MUTING”). The IGNS line is connected to a +12 V voltage source, controlled by the car ignition key. The ignition sense can utilize voltages up to 24 V, (see ”IGNITION SENSE”).

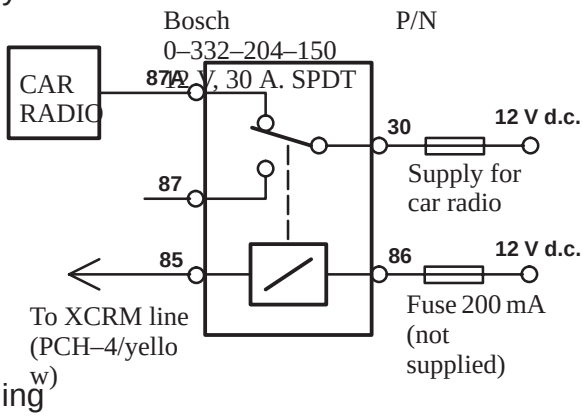
Handsfree Microphone and Speaker (HFM–4 and HFS–6)

The handsfree microphone can usually be installed on the drivers sunvisor or A–pillar. The main idea is to get the microphone as close to the driver’s mouth as possible, and to attach the microphone to a surface that is mechanically quiet. The microphone connects to the HFJ–3 MIC jack. The loudspeaker should be mounted at least 3 ft/1 m away from the handsfree mic to avoid acoustic feedback. The loudspeaker connects to the HFJ–3 SPEAKER jack.

Car Radio Mute (XCRM)

The phone offers a feature that can mute the car radio automatically during a conversation. This feature is convenient and provides for safer handsfree operation. The car radio muting feature based on grounded line, so it means that in standby, the yellow wire (XCRM) is not grounded and car radio works normally, but during a call, line is grounded and car radio is muted. The maximum load that this line can handle is 250 mA. Note that an auxiliary relay or muting unit must be used when the car radio doesn't have a mute feature available.

When a relay is used, it is connected in series with the car radio main supply. A 200 mA fuse should be used to protect the XCRM output in event ofa short circuit. Some radios have separate supplies for amplifiers and motors, and another for memory backup purposes. Very often these radios also have a secret code system, which activates itself if a break in the memory supply is detected. Be careful when installing the relay not to break the memory supply (usually markedACC or +MEM), but to install the relay in the main supply feed.



Another possibility is to use a special muting unit (SR59), which mutes the radio by connecting load resistors to the speaker lines of the car radio. Four loudspeakers can be muted and the maximum permitted power is 20 watts per channel. The muting unit can also be used as a relay to cut the main supply feed of the car radio.

Ignition Sense (IGNS)

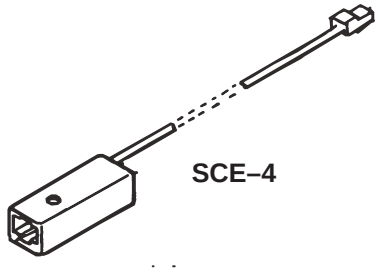
The ignition sense feature prevents the transceiver from draining the car battery by executing an auto power off 20 seconds after the ignition key has been turned off. The blue wire of the power cable is used for the ignition sense feature. The use of IGNITION SENSE is recommended to prevent accidental draining of the car's battery. The wire is connected via a 200 mA fuse to a 12/24 volts potential that is controlled by the ignition key. Do not connect it directly to the high voltage sections of the ignition circuit.

Handset (HSU–1)

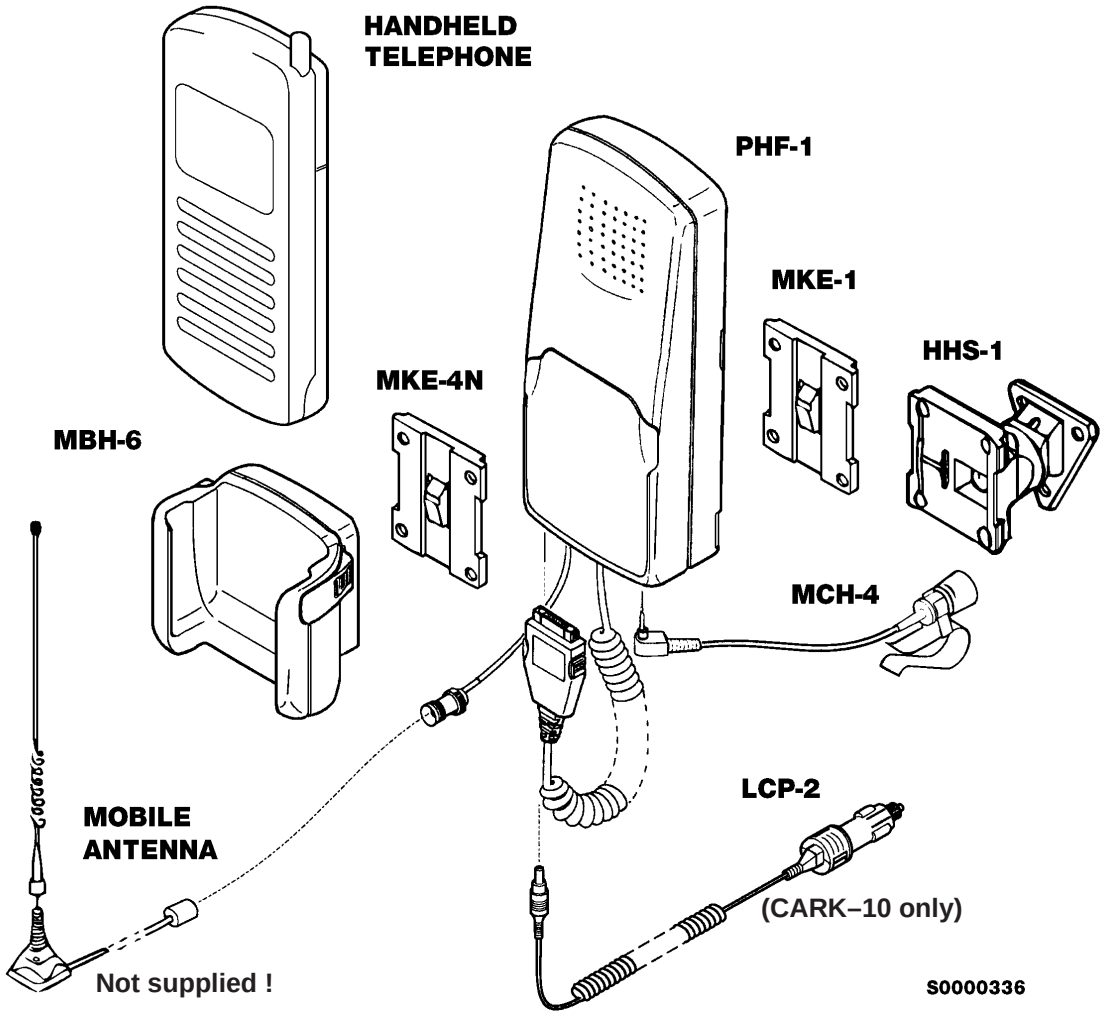
An optional handset offers more privacy during the call. The holder is attached with mounting plate MKE–1 or swivel HHS–1.

Modular 8 Pin Extension Cable (SCE–4)

This cable provides an extension between the HFJ–3 and MCH–8.



Fixed & Compact HF Holder Installation



Product List

Product:	Remarks:	Code:
Mobile holder		MBH–6
Compact HF holder	(w/cradle adapter)	PHF–1
Mounting plate	(w/12 screws, 4 nuts, 4 wash.)	MKE–1
Swivel mount	(w/6 screws)	HHS–1
HF microphone		HFM–4
Cigarette lighter cable	(CARK–10 only)	LCP–2
Power cable	(CARK–16 only)	PCH–5
Cradle adapter		MKE–4N
Cable holder		CKH–1

Mounting Plate and Swivel (MKE–1 and HHS–1)

The mounting plate (MKE–1) and swivel mount (HHS–1) mounting brackets are interchangeable. Either one can be used to mount the PHF–1 or MBH–6.The MKE–1 mounts flat and HHS–1 swivels for adjustable mounting angles. NOTE ! MKE–1 is **not** directly interchangeable with the cradle adapter MKE–4N.

Compact HF Holder (PHF–1)

Compact HF holder (PHF–1) provides and controls the supply voltage and charge current for the handportable. In addition, it controls the audio paths to handsfree equipment, and provides external antenna connection (mini–UHF).

Cigarette Lighter Cable (LCP–2, CARK–10 only)

The cigarette lighter cable connects to the compact HF holder (PHF–1) via the 5.5 mm d.c. plug. The other connector in the cable is plugged to the standard cigarette lighter jack of the vehicle. Supply voltage may vary between 10,8 and 15.6 volts.

> CAUTION !
>
> Maximum supply voltage is 15.6 volts, minus (–) in the chassis of the vehicle !
>
> Overvoltage or wrong polarity may cause serious damage to the car kit !

Power Cable (PCN–5, CARK–16 only)

The power cable connects to the compact HF holder via the 5.5 mm d.c. plug. The red (+12V) and black (GND) wires connect to the battery via the supplied fused connectors. Supply voltage may vary between 10.8 and 15.6 volts.

> CAUTION !
>
> Maximum supply voltage is 15.6 volts, minus (–) in the chassis of the vehicle !
>
> Overvoltage or wrong polarity may cause serious damage to the car kit !

Handsfree Microphone (HFM–4)

The handsfree microphone can usually be installed on the drivers sunvisor or A–pillar. The main idea is to get the microphone as close to the driver's mouth as possible, and to attach the microphone to a surface that is mechanically quiet. The microphone connects to the corresponding 2.5 mm jack in the PHF–1.

Mobile Holder (MBH–6)

The holder unit MBH–6 offers firm attachment. It is usually attached to Compact HF Holder PHF–1 with the Cradle Adapter Kit (MKE–4N), which includes the cradle adapter, 4 screws and 4 nuts.To attach the MBH–6 to the PHF–1 first you have to remove the lower cover of PHF–1 by detaching the four crossheaded screws visible underneath the PHF–1 (Figures 1, 2). Insert the four provided nuts into the corresponding slots in the cradle adapter MKE–4N, and slide the cradle adapter into its place underneath the MBH–6 (Figure 3). Do not use mounting plate MKE–1 in place of cradle adapter MKE–4N. Mount MBH–6 to its slot in the front part of PHF–1, and finally attach it by using the provided screws (Figures 4, 5). It is also possible to use the MBH–6 as a separate mobile holder, it is then attached to the vehicle with MKE–1 or HHS–1.

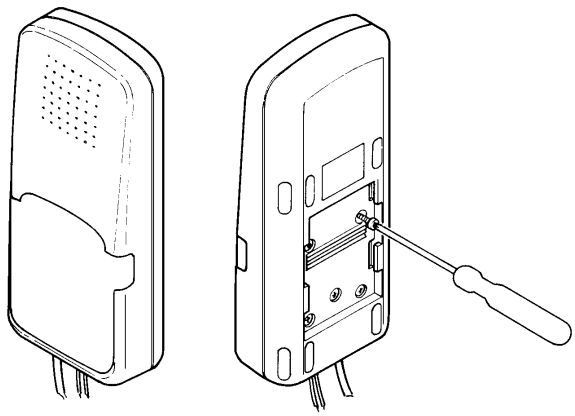


FIG 1

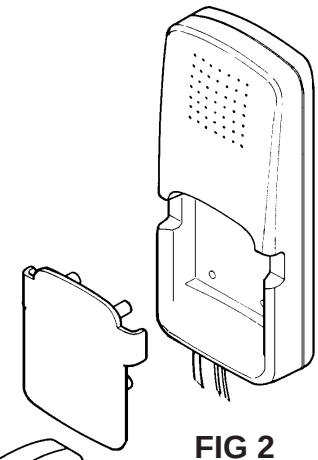


FIG 2

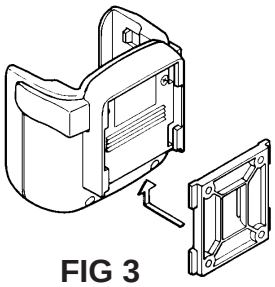


FIG 3

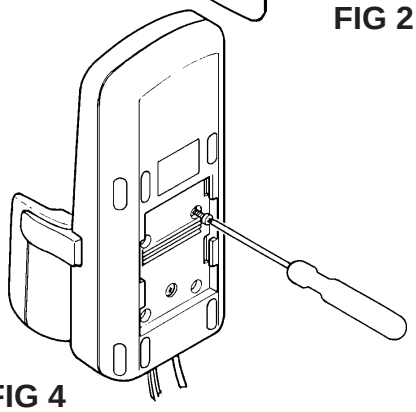


FIG 4

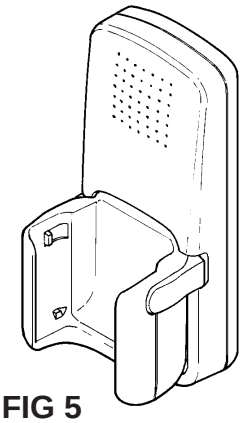


FIG 5

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